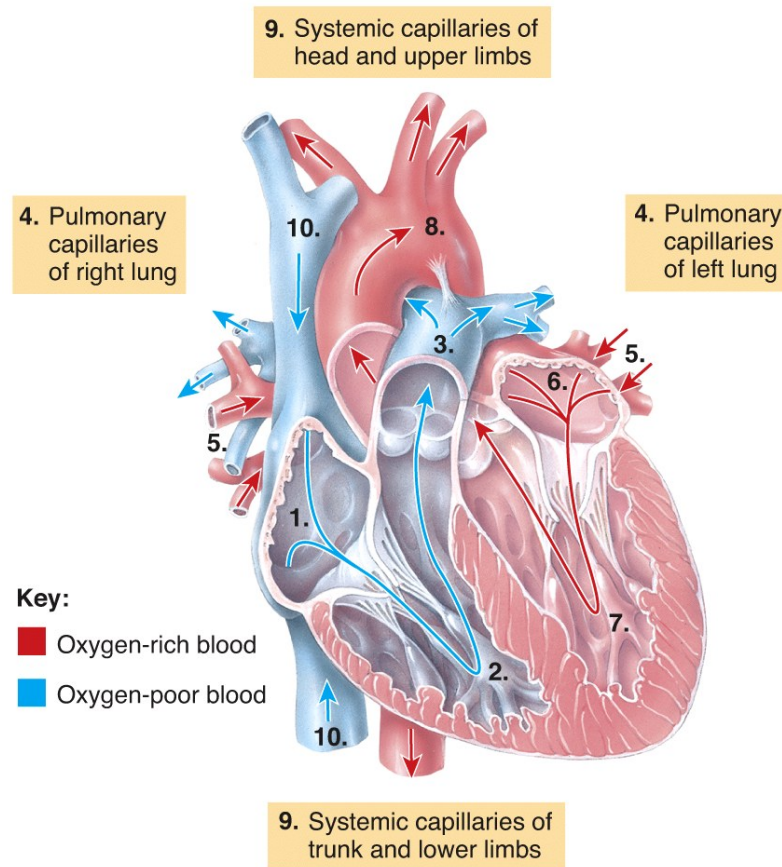


The Mammalian Heart – A Double Pump

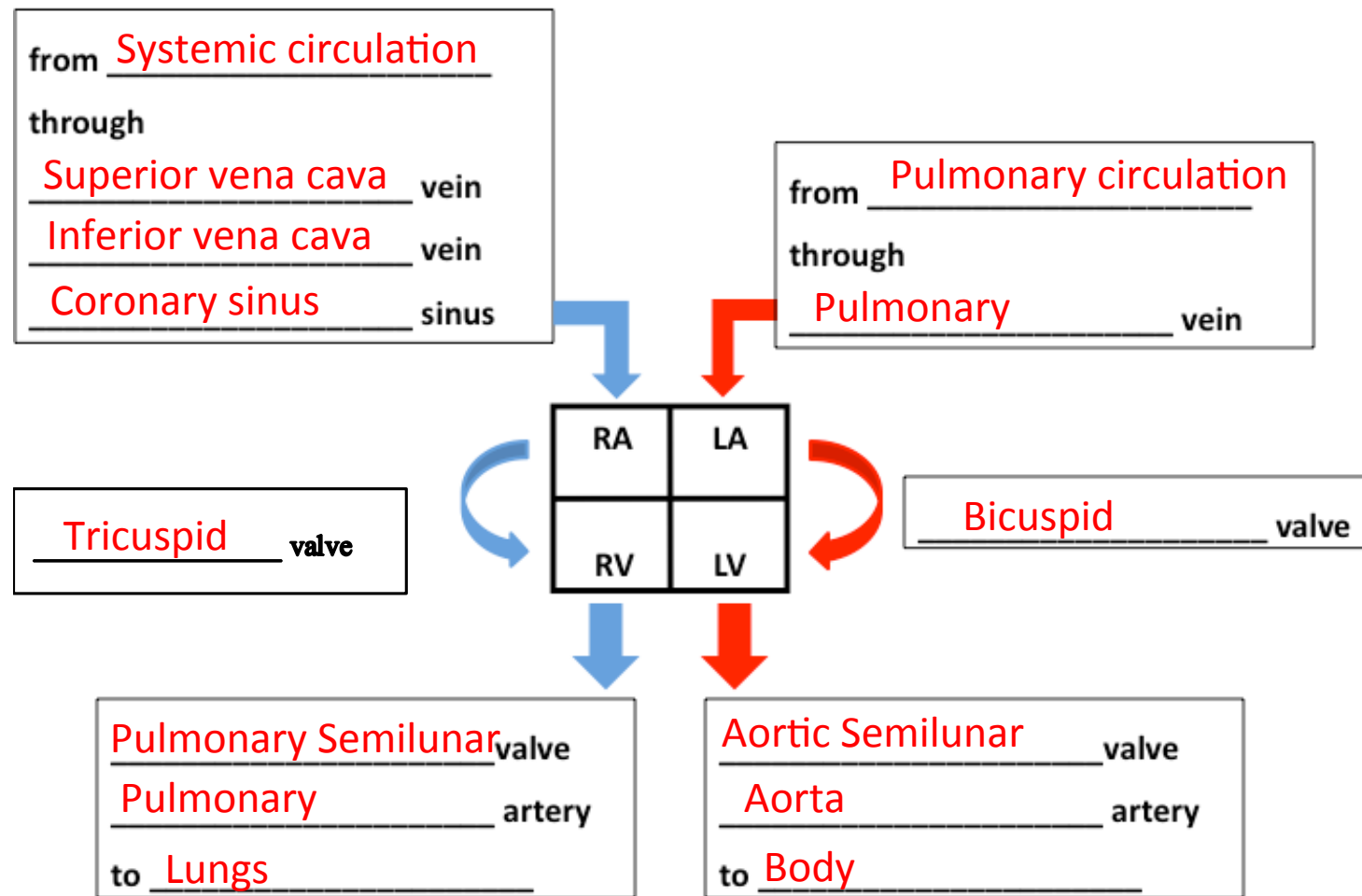
A. Blood Flow through the Mammalian Heart (the human heart as a model)



(a) Path of blood flow through heart

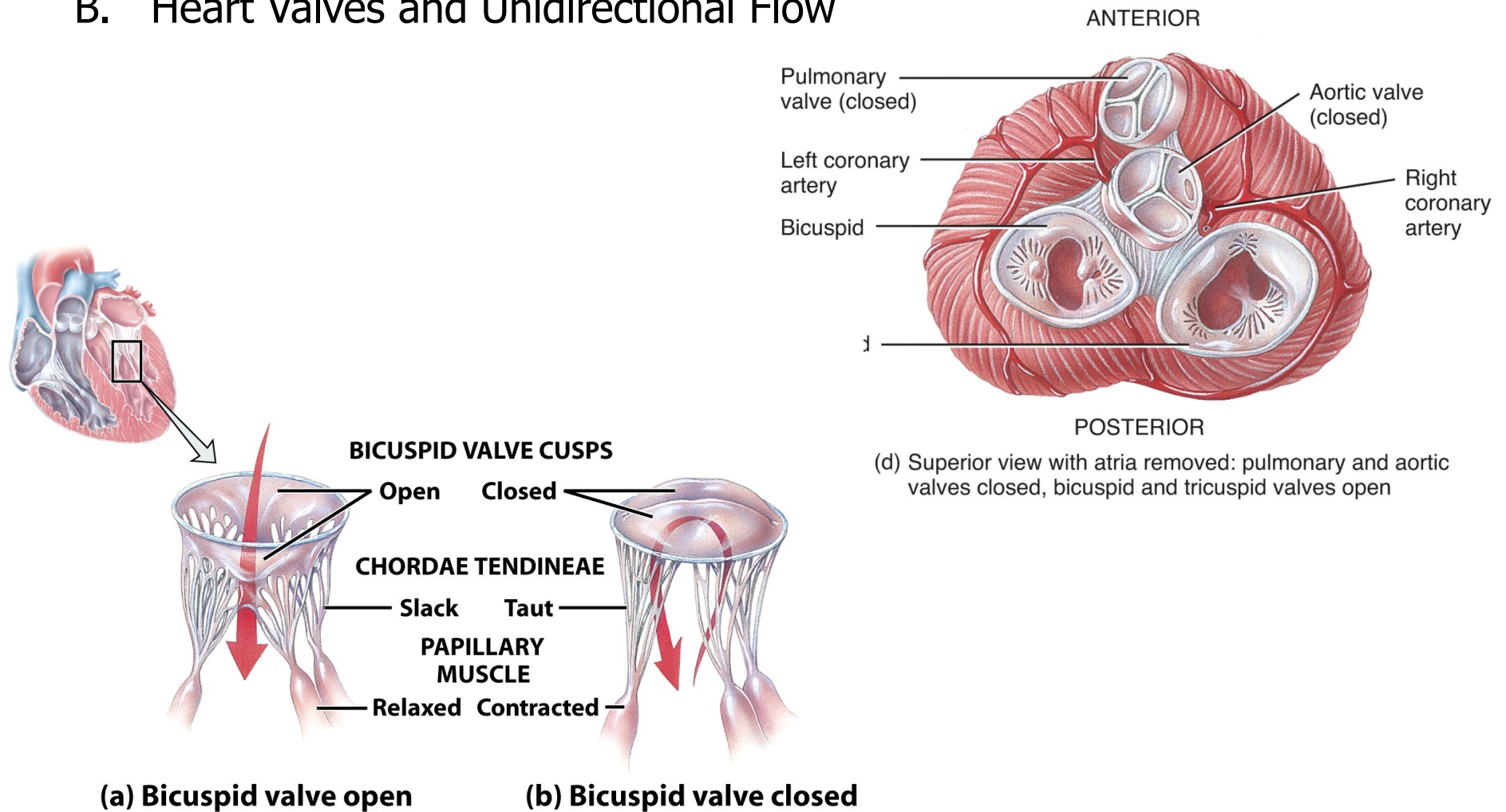
The Mammalian Heart – A Double Pump

A. Blood Flow through the Mammalian Heart (the human heart as a model)



The Mammalian Heart – A Double Pump

B. Heart Valves and Unidirectional Flow



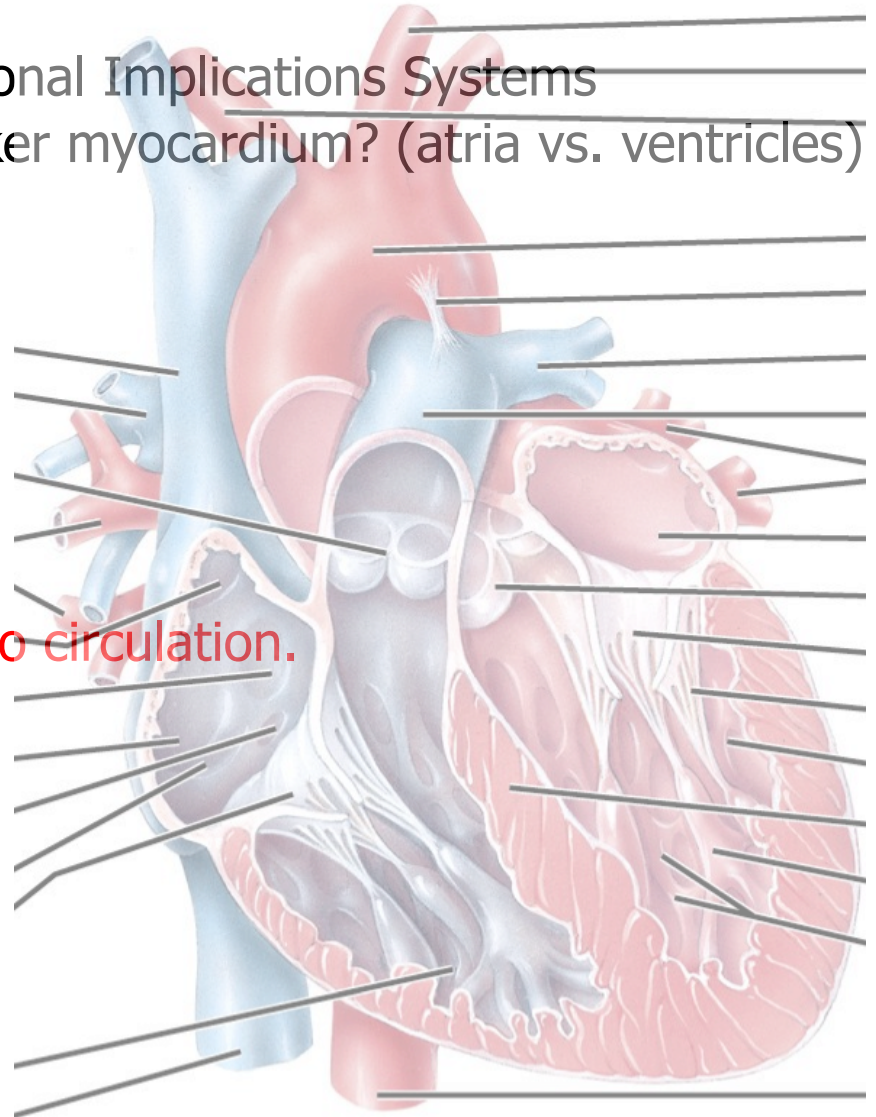
The Mammalian Heart – A Double Pump

- C. Heart Wall Thickness and Functional Implications Systems
1. Which chambers have a thicker myocardium? (atria vs. ventricles)

The ventricles

Why?

More work to pump blood into circulation.



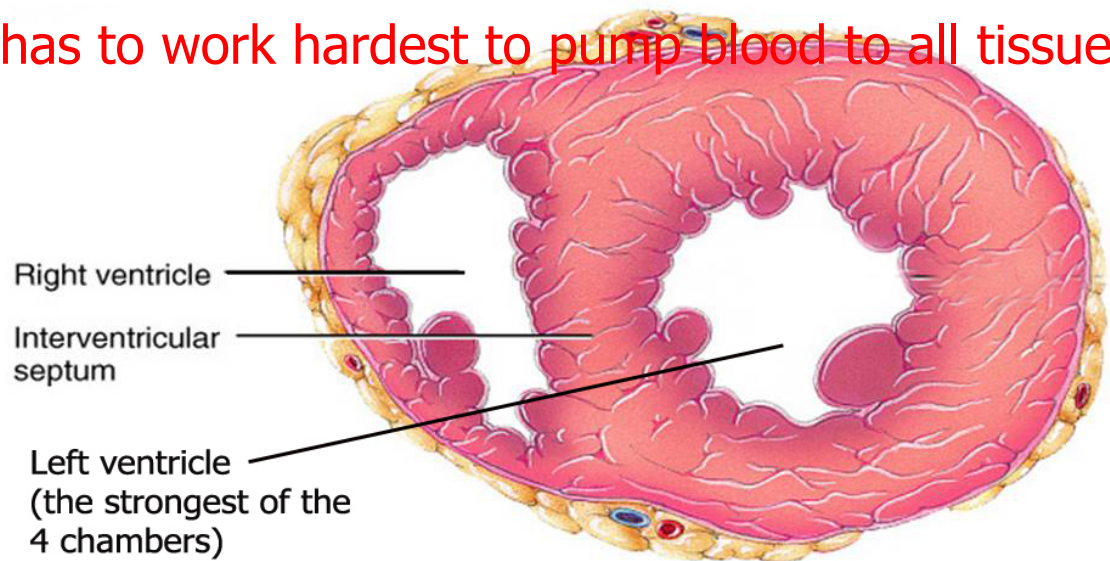
The Mammalian Heart – A Double Pump

- C. Heart Wall Thickness and Functional Implications Systems
2. Which of the 4 chambers has the thickest myocardium?

The left ventricle

Why?

The left ventricle has to work hardest to pump blood to all tissues in the body.



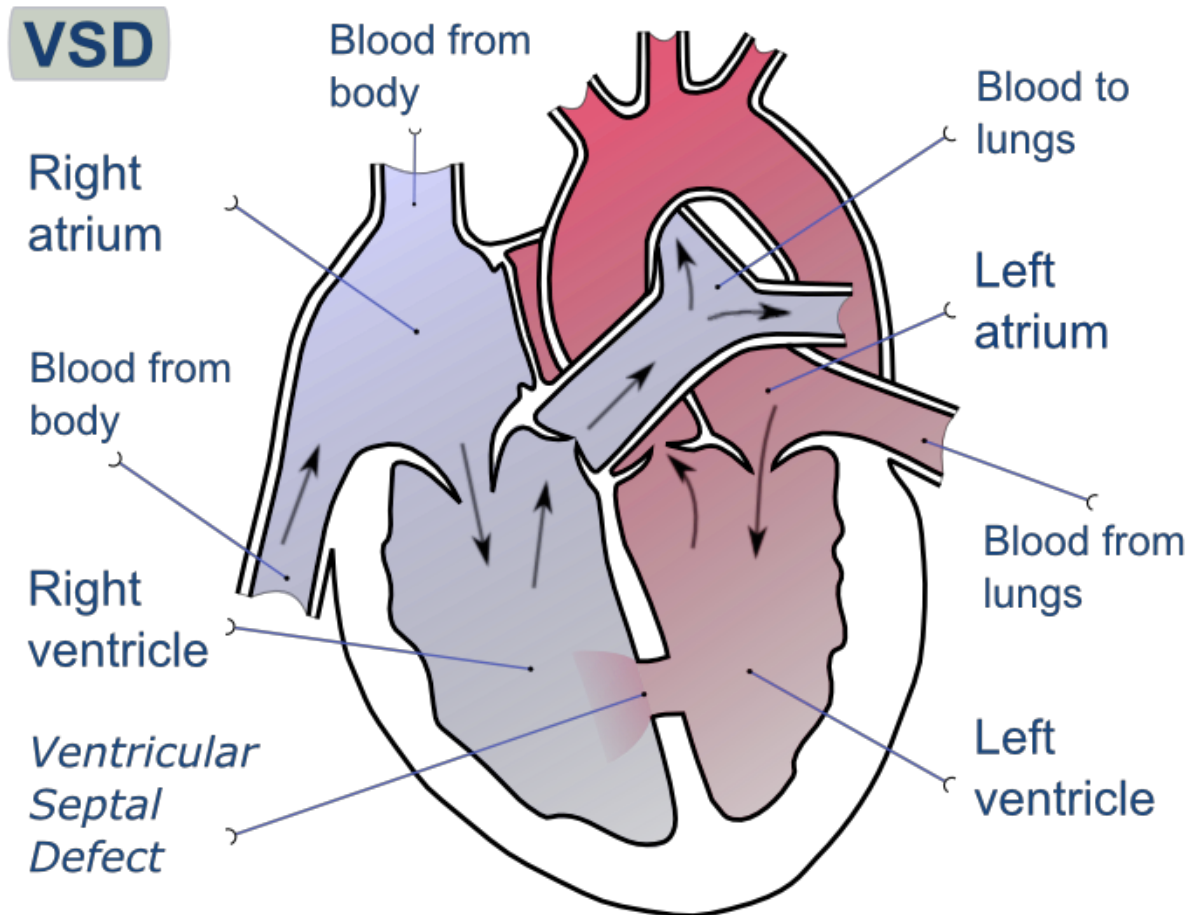
The Mammalian Heart – A Double Pump

D. Valve Disorders

	Problem	Abnormal Heart Sounds
Mitral Stenosis	Narrowing of valve opening	Lub-dup-whistle
Mitral Insufficiency	Backflow of blood into left atrium	Lub-swish-dup
Aortic Stenosis	Narrowing of valve opening	Lub-whistle-dup
Aortic Insufficiency	Backflow of blood into left ventricle	Lub-dup-swish

The Mammalian Heart – A Double Pump

E. Interventricular Septal Defect



http://upload.wikimedia.org/wikipedia/commons/e/e1/Ventricular_septal_defect-en.png